

Expert Report
John R. Alford Ph.D.
July 12, 2023

In preparing this report I have relied on various tables included in the reports of Dr. Moy, Dr. Abbott, and Dr. McCartan. The specific tables and charts I relied on are included in Appendix 1 of this report. I have also utilized information on various City and plaintiffs' plans as produced by the 'Reports' function in the 2022 Florida Redistricting web application (<https://web.floridaredistricting.esriemcs.com/redistricting/>).

For the City plans I was provided a with a 'plan' file (the form of a redistricting map utilized in the State's Florida Redistricting website mapping application) by the attorneys. For the most recent plaintiffs' P4 plan I relied on files provided for that map by the plaintiffs' attorneys. I imported one of those files (a block equivalency, or block assignment file, or .csv file) using the 'import' function of the Florida Redistricting web app, but that file did not match completely with the other 'shapefile' version of the plan that was provided along with the block file version. A set of Census blocks on the border between Districts 1 and 5 with a total population of 376 persons was included in District 5 in the 'block' file but included in District 1 in the 'shapefile' version. I modified the plan in the Florida Redistricting web app to match the 'shapefile' version, as it appeared, based on a table in Dr Abbott's report, that Dr. Abbott was using that version of P4. Note however that Dr. McCartan states in his report that he was relying on the same type of block assignment file for P4 that I initially used. If so, then his analysis is on a different version of P4 than that relied on by Dr. Abbott. Also note that the slight discrepancy in the City's map files that Dr. McCartan discusses on page 5 of his report involved only two blocks with zero population, while the discrepancy here involves six blocks and over 376 people. I could not find any data in Dr. Moy's report that would clarify which version he was relying on.

Narrow Tailoring of District 5

Much has been made of the City Commissioners reliance on 50% BVAP as a floor for District 5 for VRA compliance. The Court notes in the injunction ruling that Dr. Moy provides statistical

analysis that supports a lower minimal threshold of a BCVAP of about 48% and a similar Black share of registered voters at 49%. As the Court notes the BCVAP of District 5 in the original challenged city plan was 58%, a level above the minimal threshold suggested by Dr. Moy's analysis. The discussion below addresses several issues that this raises, including the variety of population measures being mixed in here (BVAP, BCVAP, and Black registered voter share), the election performance measures, and the degree to which the various City and Plaintiffs' plans actually vary in ways that clearly demark which plans are narrowly tailored, and which plans are not.

The plaintiffs have asserted that the City may have been in error in fixing the 50% BVAP Census proportion as a minimum for a performing district, but the plaintiffs seemingly also fixate on 50% as a bright-line test by asserting, as they do in footnote 5 on page 31, that "P4 uses race narrowly to ensure VRA compliance, resulting in the unpacking Black voters compared to the Enjoined Plan and Res. 23-271. Those plans impose the arbitrary 50% BVAP quote (sic), while the BVAP of P4 ends up at 48.4%. This naturally means Black voters will now have greater influence in surrounding districts that they are no longer artificially stripped from." The notion that a plan with a BVAP only three-tenths of a percentage point over the 'arbitrary' 50% line is not narrowly tailored, while a plan that is only 1.6 percentage points below the 'arbitrary' 50% line is self-evidently narrowly tailored seems a stretch. At best the plaintiffs' plans are slightly more narrowly tailored than the City's plans, but that does not in itself qualify them as narrowly tailored. If 50% is arbitrary, then it is unclear how the plaintiffs' efforts to keep all four of their proposed plans below the meaningless 50% (P1 at 45.2%, P2 at 46.2%, P3 at 48.8%, and P4 at 48.4%) is somehow evidence of narrow tailoring.

Note also that the focus on BVAP as the critical population statistic by which to judge the appropriateness of a remedial minority district is misplaced. However, focusing on a broader set of common redistricting population metrics also fails to clearly distinguish plaintiffs' remedial P4 from the City's plans. In the R&R the court summarizes the relevant evidence from Dr. Moy on page 47:

Moy estimated the proportion of Black, Anglo, and Hispanic registered voters required for their preferred candidate to prevail in the ten elections for which he found evidence of racially polarized voting. (Moy Rpt. at 42). He found that in elections where there was racially polarized voting, the Black preferred candidate would prevail when Black registered voters made up shares of as low as 5% of the registered voting

population, to as high as approximately 49% of the registered voting population when racially polarized voting was more pronounced. See generally (Moy Rpt.). In none of the elections Moy examined in which he found racially polarized voting did he conclude that Black registered voters would need to make up more than 50% of the registered voter population for the Black preferred candidate to prevail.

Note that Dr. Moy doesn't provide any analysis that connects district performance to BVAP, but instead focuses on the proportion of Black registered voters. In Table 1 of his supplemental report (page 2) Dr. Moy reports that the Black share of registered voters in the enjoined plan is 57.6%, in the most recently adopted City plan is 57.0%, and in Plaintiffs' P4 is 55.5%. All these plans have Black registered voter proportions that clearly exceed Dr. Moy's 49%, and by fairly similar margins. Again, note that in the quote above the R&R correctly asserts that "In none of the elections Moy examined in which he found racially polarized voting did he conclude that Black registered voters would need to make up more than 50% of the registered voter population for the Black preferred candidate to prevail." Despite this, the plaintiffs' remedial plan P4 features a District 5 with a Black registered voter proportion at over 55%.

Note also that it is generally Black CVAP, not Black VAP (or Black registered voters) that the courts focus on when evaluating districts (the bright-line Gingles 1 test for example is in my experience typically based on CVAP, not VAP and not proportion of registered voters). Here again, the attempt to distinguish the plaintiffs' various plans on the basis of the more relevant Black CVAP indicator is revealing. Appendix 1 on pages 14-16 of the most recent report from Dr. Abott provides a full reporting of the Black CVAP for the various plans. The Black CVAP for the plaintiffs' plans are: P1 53.0%, P2 54.3%, P3 56.5%, and P4 55.8%. The Black CVAP for the City's enjoined plan is 58.2% and for the proposed remedial plan is 57.4%. The notion that at 55.8% or 56.5% the plaintiffs' plans are narrowly tailored, while at 57.4% the City's remedial plan is not narrowly tailored seems far from self-evident, and indeed nothing in any of the expert reports offers any empirical basis for such a distinction.¹

¹ When focusing on CVAP proportions it is important to keep in mind that these are sample estimates and as such have a margin of error associated with them. While I have not had sufficient time to estimate the margin of error for the various districts in the various plans, based on my experience with jurisdictions of roughly comparable size to a Miami district (about 90,000 persons) I would expect the margin of error to be something in the range of plus/minus 2 to 4 percentage points. The uncertainty associated with these estimated CVAP proportion reinforces the point that the differences here across plans are both small and uncertain.

In any case, the focus here on various population metrics is incomplete. The Plaintiffs' most recent Objection filing cites Moy's analysis in support of their plan P4:

Dr. Moy performed a reconstituted elections analysis for P4's D5. (He did so for P1 and P2 as well, ECF 82-9.) His results confirm that this new district would usually allow Black voters to elect their preferred candidates. In fact, he finds that Black-preferred candidates in 11 racially polarized statewide and local contests from 2020 and 2022 would always prevail in P4's D5, garnering between 56.0 and 81.6% of the vote (compared to 55.9–80.6% in Res. 23-271 and 52.2–76.8% in the Enjoined Plan). Supp. Moy Rep. 4. Therefore, P4 includes a reasonably compact Black opportunity district, ensuring VRA compliance.

In other words, the plaintiffs' plan complies with Section 2 because Black-preferred candidates always prevailed and typically by large margins. However, note that this is clearly true of the City's enjoined plan and most recently adopted remedial plan as well, as Black-preferred candidates always prevail in those plans according to Dr. Moy. The key question then is whether any of these plans are sufficiently narrowly tailored. If we focus on expected performance, then all these plans over-shoot the minimal requirement. As the plaintiffs' Objection states on page 31: "If a district would usually elect the minority community's candidate of choice, then it is considered an opportunity (or performing) district. *See, e.g. id.* While minority voters need not be *guaranteed* to elect their preferred candidates in every election, *see LULAC*, 548 U.S. at 428, they should at least regularly be able to do so. *See, e.g., Robinson v. Ardoin*, 605 F. Supp. 3d 759, 799–800 (M.D. La. 2022), *cert. dismissed as improvidently granted*, 2023 WL 4163160 (U.S. June 26, 2023)."

As the court language cited above indicates, it is the performance of the district that establishes compliance, not whether the district falls just above of just below any particular population metric. Interesting, by this standard, none of the plans would appear to be narrowly tailored. Dr. Moy's Table 3 and 4 on page 4 of his supplemental report are informative. Whether looking at the most recent 2022 elections (his Table 3), or the previous elections that he identified as racially polarized (his Table 4), the estimated vote share for the Black preferred candidate is very similar across these plans. While all the plans produce similar safe election performance numbers, note that lowest proportions in every single election are for the enjoined City plan, and highest in every single election for the plaintiffs' proposed remedial plan P4. The average vote share for the Black preferred candidate under plan P4 is 74.6%, and the range is from 56.0% to

81.6%. Thus, even the closest election, at 56% to 46%, falls outside the traditional competitive district standard of 45%-55%. In the recently adopted City remedial proposed plan the average vote share for the Black preferred candidate is 73.3%, and the average vote share for the Black preferred candidate in the enjoined City plan is 69.2%, both lower, albeit only very modestly, than the Black preferred candidate performance in plaintiffs' P4.

Dr. Moy's analysis clearly indicates that all three plans provide a District 5 that is safe for Black-preferred candidates, that is to say all go well beyond the minimal requirement to provide a district where Black votes would at least regularly, or more often than not, or usually, be able to elect their candidate of choice, and provide a district where, by Dr. Moy's estimation, they should *always* be able to do so. However, despite the plaintiffs' assertion that theirs is the narrowly tailored plan, nothing in Dr. Moy's election performance analysis suggests that District 5 in Plan 4 is in any sense more narrowly tailored in respect to its performance for Black preferred candidates than are the City's plans. As Dr. Moy himself notes on page 3 of his supplement, "According to Table 3, the Black-preferred candidate would receive more votes under the P4 map than both the enjoined and the city's plan." Note also that according to Table 1 in Dr. Moy's supplement, the number of Black registered voters in District 5 in plaintiffs' Plan 4, at 28,156, is actually higher than the number of Black registered voters in the City's most recent plan (27,793) and the enjoined plan (28,054). Based on Dr. Moy's characterization of the of these plans, the City's enjoined and remedial plans could be viewed as more narrowly tailored than the plaintiffs' plan P4.

The general election analysis provided by Dr. Moy makes District 5 in both the City's and the plaintiffs' plans appear to be overly safe for Black candidates, however there is additional performance evidence that suggests that may not be a complete picture. Two statewide Democratic primaries in the last decade have featured prominent Black candidates competing against White candidates. The results for these contests in various forms of District 5 are reported below in Table 1.

Table 1: Democratic Primary Election Results within District 5

	City Plans			Plaintiffs' Plans			
	Benchmark	Enjoined	Remedial	PL1	PL2	PL3	PL4
2018 Dem. Gov. Primary Gillum Vote	53.6%	53.2%	53.3%	51.6%	52.0%	52.5%	52.4%
2014 Dem. AG Primary Thurston Vote	54.7%	54.7%	54.6%	52.9%	53.1%	53.6%	53.5%

In 2020 Andrew Gillum was a candidate in the Democratic primary for Governor, and in 2014 Perry Thurston was a candidate in the Democratic primary for Attorney General. In 2020 Gillum received a narrow majority of the primary vote in District 5 (53.6% in the benchmark 2013 plan, 53.2% in the City's enjoined plan, 53.3% in the City's remedial plan, and 52.4% in plaintiffs' P4). In 2014 Thurston received a similarly narrow majority of the primary vote in District 5 (54.7% in the benchmark 2013 plan, 54.7% in the City's enjoined plan, 54.6% in the City's remedial plan, and 53.5% in plaintiffs' P4). These results suggest that in a racially contested election without a party cue, District 5 may be quite competitive in all these plans, and far less secure than Dr. Moy's election analysis might indicate. However, the broader point is that while the City's plans provide a slightly larger cushion than the plaintiffs' plan based on these Democratic primary results, and a slightly smaller cushion than the plaintiffs' P4 based on Dr. Moy's general election analysis, the differences between the City's District 5 and the plaintiffs' District 5 are very modest differences of degree, and not differences of character, where election performance is concerned.

Population Overlap – What is Actually being Reshaped in the Plaintiffs' Remedial Plan P4?

In the tables on page 8 of Dr. McCartan's report the population overlap is summarized, first in percentage form in Table 6 and then in population numbers in Table 6. Table 5 shows that for both District 2 and District 5 the City's adopted remedial proposed plan and the plaintiffs' remedial plan P4 retain over 90% of the population from their respective forms in the enjoined plan. At 96.7%, plaintiffs' plan P4 retains slightly more of the enjoined District 2 population than does the City's remedial plan, while in District 5 the City's remedial plan, at 94.7, retains slightly more of the enjoined District 5 population than does plaintiffs' remedial P4 at 92.5%.

The major differences between these plans are centered in Districts 1, 3, and 4, where the City's plan retains over 90% of the population in each of these Districts, while the plaintiffs' P4 retains only about one-half of the population in these three districts relative to the enjoined plan. What this demonstrates is that the major dispute here is not in how either District 5 or District 2 should be configured, but rather the distinction comes in the wholesale redraw of three majority

Hispanic districts in the plaintiffs' plan P4 relative to the much more stable configuration of these districts in the City's remedial plan. We can see the same pattern in Tables 7 and 8 on page 9 of Dr. McCartan's report, where the population overlap is displayed relative to the benchmark 2013 plan. Again, the degree of overlap is high in Districts 2 and 5 in both the City's and the plaintiffs' remedial plans but marked lower in the plaintiffs' P4 for Districts 1, 3, and 4. All three of these districts are at over 80% HCAP in both the City's and the plaintiffs' remedial plans, so the very substantial disruption of the existing districts in the plaintiffs' P4 is not explained by the relatively modest differences in proportion Hispanic in the proposed districts.

What does differ substantively between the City's configuration of these three Hispanic majority districts and the plaintiffs' proposed configuration is the election performance. Dr. Moy provides comparative election results only for District 5, but similar reconstituted election results are informative in the remaining districts in the plan. For example, in District 2 the Biden vote in 2020 was 65.0% in the 2013 benchmark plan, and a very similar 65.6% in the City's enjoined plan, 65.7% in the City's adopted remedial plan, and 65.5% in the plaintiffs' plan P4. So, District 2, like District 5 as discussed above, is a secure Democratic district in all of the plans.² Turning to the three majority Hispanic districts, in District 3 the Biden vote in 2020 was 51.5% in the 2013 benchmark plan, and a very similar 50.9% in the City's enjoined plan, 52.8% in the City's adopted remedial plan, and 50.4% in the plaintiffs' plan P4. So, District 3 is an almost evenly split district, tilting only very slightly Democratic in all the plans. In District 4 the Biden vote in 2020 was 41.3% in the 2013 benchmark plan, a similar 43.6% in the City's enjoined plan, and 43.1% in the City's adopted remedial plan. In the plaintiffs' P4 the Democratic share is dropped to 37.6%, giving the Republicans a roughly 6-point boost. So, District 4 leans securely Republican in all the plans, but most securely in P4. The reverse occurs in District 1 where the Biden vote in 2020 was 48.3% in the 2013 benchmark plan, and a similar 50.4% in the City's enjoined plan, 50.0% in the City's adopted remedial plan, but the Biden vote share rises to 57.2% in the plaintiffs' plan P4. District 1 is almost perfectly split in the City's plans, as it was

² Dr. Abbott dismisses partisanship as an issue here in part because the City elections are non-partisan. However, that does not mean that information from the analysis of partisan elections is uninformative regarding the City of Miami elections, as Dr. Moy's use of a broad set of partisan elections in his analysis would suggest. Moreover, in modern polarized U.S. politics voting patterns in partisan elections typically match fairly closely with voter ideology. For example, in this report I use the 2020 Biden vote share, and in the Florida CNN exit polls from that 2020 election contest 83% of self-described liberals reported voting for Biden, compared to only 16% of self-described conservatives (<https://www.cnn.com/election/2020/exit-polls/president/florida/0>).

previously in the benchmark, but all the plaintiffs' plans, including P4, include a configuration of District 1 that is tilted Democratic. These changes in the election performance of Districts 1 and 4 indicate a significant impact on the political character of District 1 as the district shifts less conservative, while the conservative tilt of voters has increased in District 4. In sum, while there are only very minimal differences in the election performance across the City's and the plaintiffs' plans in Districts 2 and 5, in the three Hispanic majority districts there are political differences between the City's plans and the plaintiffs' plans.

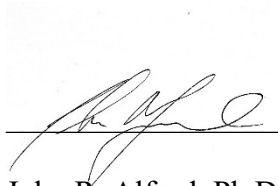
Summary Conclusions

Once the importance of the 50% BVAP threshold is set aside, as the Court has done here (whether correctly or not), the issue of the degree to which the various District 5 maps are narrowly tailored turns to other indicators. In performance terms, both the City's remedial plan and the plaintiffs' proposed remedial plan P4, as well as the City's enjoined plan, provide highly secure election margins for Black-preferred candidates according to Dr. Moy, but the review of the racially contested Democratic primary analysis suggests that all the plans may in fact be more narrowly tailored than the general election analysis suggests. The plaintiffs' contention that their plan P4 is more narrowly tailored than the City's plans is not born out by Dr. Moy's analysis of performance, as the P4 version of District 5 is even safer than either the City's enjoined plan or the City's remedial plan. Turning to the population proportions, neither Black CVAP, nor Black registration proportions suggest any clear distinction between these plans, as all fall in the 55.8-58.2 percent range for CVAP, and the 55.5-57.6 range for Black share of registered voters. Unless one wants to argue for an arbitrary maximum line at 56%, it's hard to see how these numbers can be used to meaningfully distinguish either empirical performance or the legality of the plaintiffs' remedial plan from either the enjoined plan or the City's remedial plan. In short, if the City's District 5 is not narrowly tailored, then neither is the plaintiffs' P4. Alternatively, if the plaintiffs' District 5 in P4 is narrowly tailored, as they assert, then so are the City's versions of District 5.

Turning to the district population overlap analysis provided Dr. McCartan, it is clear that what distinguishes the plaintiffs' proposed remedial plan P4 from the City's remedial plan, and the

enjoined plan, is not the treatment of District 5 or District 2, but instead is the movement of population within and across the three majority Hispanic Districts (1,3, and 4) where the plaintiffs' remedial plan P4 that drops population overlap from over 90% to near 50%. This substantial redraw of the districts in the plaintiffs' remedial plan is not about raising or lowering or even equalizing Hispanic population majorities across these districts as all remain overwhelming Hispanic by any measure in all these plans. What is altered is the political profile of these districts with the already solidly Republican District 4 shifting more Republican, while District 1 sees its profile shifted from highly competitive to leaning Democratic.

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A handwritten signature in black ink, appearing to read "John R. Alford", is written over a horizontal line.

John R. Alford, Ph.D.

Appendix 1

Selected Tables from the Reports of Dr. Moy, Dr. Abott, and Dr. McCartan

Table 1 from Dr. Moy's Supplemental Report Dated July 1, 2023

1 Racial Demographics of Registered Voters in District 5

There are 220,103 registered voters in Miami.¹ In Table 1 I show the racial composition of registered voters under each map's District 5. The City of Miami has a majority-Hispanic electorate with Anglos (non-Hispanic whites) constituting 21% of the electorate and Blacks constituting 17% of the electorate.

Table 1: District 5 Racial Composition: Registered Voters

Race	Enjoined	Enjoined %	P4	P4 %	City	City %
Anglo	6,813	14.0%	7,550	15.0%	6,782	14.0%
Black	28,054	57.6%	28,156	55.5%	27,793	57.0%
Hispanic	13,166	27.0%	14,324	28.0%	13,338	27.0%
AAPI/American Indian	661	1.3%	703	1.4%	713	1.5%
Total	48,694	-	50,733	-	48,626	-

2 Black-Preferred Candidates in Recent Elections

In this section, I analyze six recently held contests in 2022 to assess the extent to which they show patterns of racially polarized voting: U.S. Senate, Governor, Attorney General, Chief Financial Officer, Commissioner of Agriculture, and County Judge Group 5. I estimate the extent to which Black voters cohesively support a single candidate using bivariate scatterplots. The x-axis corresponds with the Black Share of the Total Citizen Voting Age Population for 2020, while the y-axis corresponds with the Black preferred candidate's vote share within Miami precincts.² I draw a linear line of best fit through the cluster of precincts. The positive association means that as the Black share of the Citizen Voting Age Population increases, the Black-preferred candidate receives a higher share of the vote.

For all contests, when the precinct is homogeneously Black, the identified Black-preferred candidate receives overwhelming support. Similarly, when precincts are homogeneously non-Black, the Black-preferred candidate fails to receive the majority of the votes on average. All of the six contests analyzed show signs of racially polarized voting.³

In Table 2, I indicate which individuals are the Black-preferred candidates and include their ethnicity in parentheses: "B" represents Black, "W" represents non-Hispanic white, and "H" represents Hispanic of any race.

Table 2: List of Elections Analyzed

Race	Black-Preferred Candidate	Non-Black-Preferred Candidate
US Senate	Demings (B)	Rubio (H)
Governor	Crist (W)	DeSantis (W)
Attorney General	Ayala (B)	Moody (W)
Chief Financial Officer	Hattersley (W)	Patronis (W)
Commissioner of Agriculture	Blemur (B)	Simpson (W)
County Judge Group 5	Seraphin (B)	Diaz de la Portilla (H)

1. Consistent with the first report, I include Black, Anglo, Hispanic, AAPI/American Indian and exclude voters whose race is recorded as "Other," "Multi-racial," or "Unknown" throughout the analysis. Registered voters recorded as both active and inactive status are included in this analysis.

2. For this analysis, I use the top two candidates only.

3. In 5 of the 6 contests, when the Black share of CVAP is 0, the Black-preferred candidate receives a vote share in the low 40s. In the County Judge Group 5, however, when the Black share of CVAP is 0, the Black-preferred candidate receives 49% of the vote. While still under 50%, there is suggestive evidence that the County Judge Group 5 may show less racial polarization than the other contests.

Tables 3 and 4 from Dr. Moy's Supplemental Report Dated July 1, 2023

Table 3: Black-Preferred Candidate Performance in Recent Election

Race	Map	Vote Total	Black-Pref. #	Black-Pref. %	Non-Black-Pref. #	Non-Black-Pref. %
County Judge Grp 5	Enjoined	7157	5234	73.1%	1923	26.9%
County Judge Grp 5	P4	7046	5433	77.1%	1613	22.9%
County Judge Grp 5	City	7548	5735	76.0%	1813	24.0%
US Senate	Enjoined	16807	12230	72.8%	4577	27.2%
US Senate	P4	15942	12718	79.8%	3224	20.2%
US Senate	City	17753	13815	77.8%	3938	22.2%
Governor	Enjoined	16849	11989	71.2%	4860	28.8%
Governor	P4	15966	12462	78.1%	3504	21.9%
Governor	City	17782	13530	76.1%	4252	23.9%
Attorney General	Enjoined	16660	11979	71.9%	4681	28.1%
Attorney General	P4	15876	12403	78.1%	3473	21.9%
Attorney General	City	17678	13507	76.4%	4171	23.6%
CFO	Enjoined	16554	11908	71.9%	4646	28.1%
CFO	P4	15762	12418	78.8%	3344	21.2%
CFO	City	17552	13477	76.8%	4075	23.2%
Comm. of Agriculture	Enjoined	16607	12182	73.4%	4425	26.2%
Comm. of Agriculture	P4	15830	12645	79.9%	3185	20.1%
Comm. of Agriculture	City	17608	13743	78.0%	3865	22.0%

3 Black-Preferred Candidate Performance in Previously Racially Polarized Elections

Table 4: Black-Preferred Candidate Performance in Previous RPV Elections

Race	Map	Vote #	Black-Pref. #	Black-Pref. %	Non-Black-Pref. #	Non-Black-Pref. %
President	Enjoined	36848	28308	76.8%	8540	23.2%
President	P4	38379	31312	81.6%	7067	18.4%
President	City	41234	33233	80.6%	8001	19.4%
County Mayor	Enjoined	32852	24968	76.0%	7884	24.0%
County Mayor	P4	34145	27473	80.5%	6672	19.5%
County Mayor	City	36703	29209	79.6%	7494	20.4%
County Judge Grp 9	Enjoined	12043	7281	60.5%	4762	39.5%
County Judge Grp 9	P4	12798	8198	64.1%	4600	35.9%
County Judge Grp 9	City	13325	8443	63.4%	4882	36.6%
Circuit Judge Group 57	Enjoined	12348	7563	61.2%	4785	38.8%
Circuit Judge Group 57	P4	13140	8741	66.5%	4399	33.5%
Circuit Judge Group 57	City	13685	8976	65.6%	4709	34.4%
Circuit Judge Group 67	Enjoined	12189	6362	52.2%	5827	47.8%
Circuit Judge Group 67	P4	12891	7219	56.0%	5672	44.0%
Circuit Judge Group 67	City	13428	7504	55.9%	5924	44.1%

In this section, I re-analyze five 2020 contests that exhibited signs of racial polarization in my previous report: President, County Mayor, County Judge Group 9, Circuit Judge Group 57, and Circuit Judge Group 67. In Table 4, I aggregate the official election results for each district and show how many votes the Black-preferred candidate would have received under each map. Across all contests, the Black-preferred candidate would have received the majority of the votes in District 5.

Figures 2 - 6 depicts the relationship between the Black share of the Citizen Voting Age Population and the share that the Black-preferred candidate received. I report the linear line of best fit and the R^2 in each graph. As we see in the figures, Black voters are able to translate their preferences into high vote shares for their preferred candidate. Furthermore, the P4 plan increases the likelihood that the Black-preferred candidate will prevail over the enjoined map and the plan proposed by the city. Specifically, as shown in the

Tables from Appendix 1 to the Second Expert Report of Dr. Abbott dated
July 5, 2023

Appendices

Appendix 1. Plan District Demographics

Enjoined Plan									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	88,108	-340	-0.4	3.5	89.5	11.0	5.0	86.1	8.2
2	93,300	+4,852	+5.5	37.4	48.6	7.3	40.5	44.4	8.7
3	87,658	-790	-0.9	7.7	88.3	5.4	9.9	85.6	3.9
4	86,597	-1,851	-2.1	7.6	89.5	3.1	8.3	89.6	1.3
5	86,578	-1,870	-2.1	10.5	40.6	50.3	9.5	30.8	58.2
Overall Range		6,722	7.6						

Version 12									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	87,465	-983	-1.1	3.4	89.7	10.9	5.0	85.9	8.3
2	88,749	+301	+0.3	36.1	49.9	7.7	38.1	46.3	9.7
3	89,479	+1,031	+1.2	10.7	84.4	5.4	13.8	81.4	3.8
4	89,390	+942	+1.1	7.4	89.8	3.1	8.0	89.8	1.4
5	87,158	-1,290	-1.5	10.8	40.7	50.0	9.8	31.4	57.0
Overall Range		2,276	2.6						

Version 14 (D1 alt)									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	87,465	-983	-1.1	3.4	89.7	10.9	5.0	85.9	8.3
2	89,424	+976	+1.1	35.9	51.2	5.9	38.9	49.5	5.7
3	89,530	+1,082	+1.2	7.1	89.5	5.1	9.9	86.0	3.6
4	88,247	-201	-0.2	10.2	84.6	5.1	10.4	83.6	4.8
5	87,575	-873	-1.0	11.0	40.5	49.9	10.2	31.4	56.6
Overall Range		2,065	2.3						

Version 12 D2 alt									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	87,465	-983	-1.1	3.4	89.7	10.9	5.0	85.9	8.3
2	90,146	+1,698	+1.9	36.7	49.4	7.6	38.4	45.9	9.6
3	88,806	+358	+0.4	10.1	85.0	5.5	12.7	82.6	3.8
4	89,390	+942	+1.1	7.4	89.8	3.1	8.0	89.8	1.4
5	86,434	-2,014	-2.3	10.5	40.6	50.3	9.6	31.4	57.4
Overall Range		3,712	4.2						

Version 12 D5 alt									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	87,465	-983	-1.1	3.4	89.7	10.9	5.0	85.9	8.3
2	89,473	+1,025	+1.2	36.2	49.8	7.7	38.0	46.1	9.8
3	89,479	+1,031	+1.2	10.7	84.4	5.4	13.8	81.4	3.8
4	89,390	+942	+1.1	7.4	89.8	3.1	8.0	89.8	1.4
5	86,434	-2,014	-2.3	10.5	40.6	50.3	9.6	31.4	57.4
Overall Range		3,045	3.4						

Version 12 D3 alt v1									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	87,465	-983	-1.1	3.4	89.7	10.9	5.0	85.9	8.3
2	89,593	+1,145	+1.3	36.5	49.6	7.7	38.6	45.8	9.6
3	89,194	+746	+0.8	10.5	84.5	5.4	12.6	82.7	3.8
4	89,555	+1,107	+1.3	7.2	90.0	3.1	7.9	90.0	1.4
5	86,434	-2,014	-2.3	10.5	40.6	50.3	9.6	31.4	57.4
Overall Range		3,159	3.6						

Version 12 D3 alt v2									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	87,201	-1,247	-1.4	3.4	89.8	10.8	5.0	85.9	8.3
2	89,593	+1,145	+1.3	36.5	49.6	7.7	38.6	45.8	9.6
3	89,194	+746	+0.8	10.5	84.5	5.4	12.6	82.7	3.8
4	89,555	+1,107	+1.3	7.2	90.0	3.1	7.9	90.0	1.4
5	86,698	-1,750	-2.0	10.5	40.7	50.3	9.6	31.6	57.3
Overall Range		2,895	3.3						

Resolution 23-271 - Version 12 D3 alt v3 - City's Proposed Remedial Plan									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	87,455	-993	-1.1	3.4	89.7	10.9	5.0	85.9	8.3
2	89,593	+1,145	+1.3	36.5	49.6	7.7	38.6	45.8	9.6
3	89,194	+746	+0.8	10.5	84.5	5.4	12.6	82.7	3.8
4	89,555	+1,107	+1.3	7.2	90.0	3.1	7.9	90.0	1.4
5	86,444	-2,004	-2.3	10.5	40.6	50.3	9.6	31.4	57.4
Overall Range		3,149	3.6						

P1									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	86,569	-1,879	-2.1	14.9	70.1	16.1	14.8	66.3	16.5
2	89,078	+630	+0.7	31.2	57.9	5.8	33.2	56.3	6.4
3	87,666	-782	-0.9	5.8	90.8	5.2	7.4	88.6	3.6
4	89,091	+643	+0.7	3.5	95.0	3.0	4.5	94.1	0.8
5	89,837	+1,389	+1.6	13.8	41.2	45.2	12.4	32.3	53.0
Overall Range		3,268	3.7						

P2									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	86,541	-1,907	-2.2	4.3	86.6	13.7	6.0	81.0	12.4
2	89,897	+1,449	+1.6	36.9	48.7	7.9	39.6	44.3	10.1
3	85,108	-3,340	-3.8	10.6	84.8	4.3	12.3	84.5	2.4
4	90,388	+1,940	+2.2	2.9	95.6	3.3	3.5	94.5	1.5
5	90,307	+1,859	+2.1	13.3	41.0	46.2	11.9	31.8	54.3
Overall Range		5,280	6.0						

P3									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	87,607	-841	-1.0	5.6	85.4	13.0	7.2	80.6	11.7
2	89,522	+1,074	+1.2	37.9	48.2	7.0	41.1	44.2	8.2
3	85,973	-2,475	-2.8	10.6	84.9	4.3	12.2	84.6	2.4
4	90,388	+1,940	+2.2	2.9	95.6	3.3	3.5	94.5	1.5
5	88,751	+303	+0.3	11.3	41.1	48.8	10.1	31.6	56.5
Overall Range		4,415	5.0						

P4									
Dist.	Total Pop.	Pop. Dev.	% Dev.	WVAP	HVAP	BVAP	WCVAP	HCVAP	BCVAP
1	87,556	-892	-1.0	5.6	85.8	13.0	7.2	80.3	11.9
2	89,522	+1,074	+1.2	37.9	48.2	7.0	41.1	44.2	8.2
3	87,829	-619	-0.7	10.4	85.1	4.2	12.1	84.7	2.4
4	87,667	-781	-0.9	2.9	95.6	3.2	3.4	94.5	1.5
5	89,667	+1,219	+1.4	11.2	41.5	48.4	10.0	32.3	55.8
Overall Range		2,111	2.4						

Tables 5 and 6 from Dr. McCartan's Report Dated July 1, 2023

two versions have identical overlap calculations; they are reported together as “City” below.

Table 5: District population overlap between Enjoined and various other plans, expressed as a percentage of the population of each plan’s corresponding district.

Enjoined plan	Overlap with...					
	Enjoined	City	P1	P2	P3	P4
District 1	100	98.2	61.1	56.7	54.8	53.3
District 2	100	92.2	63.3	89.5	96.7	96.7
District 3	100	90.6	83.5	45.4	46.0	47.1
District 4	100	94.8	56.9	42.7	42.7	44.0
District 5	100	94.7	84.1	85.8	94.0	92.5
<i>Districts 1, 3, and 4</i>	100	97.8	77.0	48.7	48.8	49.3
<i>Overall</i>	100	94.1	69.8	64.3	66.9	67.0

Table 6: District population overlap between Enjoined and various other plans.

Enjoined plan	Overlap with...					
	Enjoined	City	P1	P2	P3	P4
District 1	88,108	85,892	52,916	49,042	48,043	46,690
District 2	93,300	82,563	56,388	80,476	86,533	86,533
District 3	87,658	80,842	73,237	38,662	39,527	41,383
District 4	86,597	84,861	50,699	38,554	38,554	38,554
District 5	86,578	81,843	75,561	77,483	83,418	82,981
<i>Districts 1, 3, and 4</i>	262,363	251,595	176,852	126,258	126,124	126,627
<i>Overall</i>	442,241	416,001	308,801	284,217	296,075	296,141

22. I then calculated the overlap between districts in the 2013 plan to corresponding districts in the Enjoined, City, and P1–P4 plans. These calculations are summarized in Tables 7 (percentage overlap) and 8 (raw population counts). Because the two blocks that differ between both provided versions of the City plan are not populated, these two versions have identical overlap calculations; they are reported together as “City” below.

Appendix 2: CV of John R. Alford, Ph.D.

John R. Alford

Curriculum Vitae

July 2023

Dept. of Political Science
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Employment:

Professor, Rice University, 2015 to present.
Associate Professor, Rice University, 1985-2015.
Assistant Professor, University of Georgia, 1981-1985.
Instructor, Oakland University, 1980-1981.
Teaching-Research Fellow, University of Iowa, 1977-1980.
Research Associate, Institute for Urban Studies, Houston, Texas, 1976-1977.

Education:

Ph.D., University of Iowa, Political Science, 1981.
M.A., University of Iowa, Political Science, 1980.
M.P.A., University of Houston, Public Administration, 1977.
B.S., University of Houston, Political Science, 1975.

Books:

Predisposed: Liberals, Conservatives, and the Biology of Political Differences. New York: Routledge, 2013. Co-authors, John R. Hibbing and Kevin B. Smith.

Articles:

“Political Orientations Vary with Detection of Androstenone,” with Amanda Friesen, Michael Gruszczynski, and Kevin B. Smith. **Politics and the Life Sciences**. (Spring, 2020).

“Intuitive ethics and political orientations: Testing moral foundations as a theory of political ideology.” with Kevin Smith, John Hibbing, Nicholas Martin, and Peter Hatemi. **American Journal of Political Science**. (April, 2017).

“The Genetic and Environmental Foundations of Political, Psychological, Social, and Economic Behaviors: A Panel Study of Twins and Families.” with Peter Hatemi, Kevin Smith, and John Hibbing. **Twin Research and Human Genetics**. (May, 2015.)

“Liberals and conservatives: Non-convertible currencies.” with John R. Hibbing and Kevin B. Smith. **Behavioral and Brain Sciences** (January, 2015).

“Non-Political Images Evoke Neural Predictors Of Political Ideology.” with Woo-Young Ahn, Kenneth T. Kishida, Xiaosi Gu, Terry Lohrenz, Ann Harvey, Kevin Smith, Gideon Yaffe, John Hibbing, Peter Dayan, P. Read Montague. **Current Biology**. (November, 2014).

“Cortisol and Politics: Variance in Voting Behavior is Predicted by Baseline Cortisol Levels.” with Jeffrey French, Kevin Smith, Adam Guck, Andrew Birnie, and John Hibbing. **Physiology & Behavior**. (June, 2014).

“Differences in Negativity Bias Underlie Variations in Political Ideology.” with Kevin B. Smith and John R. Hibbing. **Behavioral and Brain Sciences**. (June, 2014).

“Negativity bias and political preferences: A response to commentators Response.” with Kevin B. Smith and John R. Hibbing. **Behavioral and Brain Sciences**. (June, 2014).

“Genetic and Environmental Transmission of Political Orientations.” with Carolyn L. Funk, Matthew Hibbing, Kevin B. Smith, Nicholas R. Eaton, Robert F. Krueger, Lindon J. Eaves, John R. Hibbing. **Political Psychology**, (December, 2013).

“Biology, Ideology, and Epistemology: How Do We Know Political Attitudes Are Inherited and Why Should We Care?” with Kevin Smith, Peter K. Hatemi, Lindon J. Eaves, Carolyn Funk, and John R. Hibbing. **American Journal of Political Science**. (January, 2012)

“Disgust Sensitivity and the Neurophysiology of Left-Right Political Orientations.” with Kevin Smith, John Hibbing, Douglas Oxley, and Matthew Hibbing, **PlosONE**, (October, 2011).

“Linking Genetics and Political Attitudes: Re-Conceptualizing Political Ideology.” with Kevin Smith, John Hibbing, Douglas Oxley, and Matthew Hibbing, **Political Psychology**, (June, 2011).

“The Politics of Mate Choice.” with Peter Hatemi, John R. Hibbing, Nicholas Martin and Lindon Eaves, **Journal of Politics**, (March, 2011).

“Not by Twins Alone: Using the Extended Twin Family Design to Investigate the Genetic Basis of Political Beliefs” with Peter Hatemi, John Hibbing, Sarah Medland, Matthew Keller, Kevin Smith, Nicholas Martin, and Lindon Eaves, **American Journal of Political Science**, (July, 2010).

“The Ultimate Source of Political Opinions: Genes and the Environment” with John R. Hibbing in **Understanding Public Opinion**, 3rd Edition eds. Barbara Norrander and Clyde Wilcox, Washington D.C.: CQ Press, (2010).

“Is There a ‘Party’ in your Genes” with Peter Hatemi, John R. Hibbing, Nicholas Martin and Lindon Eaves, **Political Research Quarterly**, (September, 2009).

“Twin Studies, Molecular Genetics, Politics, and Tolerance: A Response to Beckwith and Morris” with John R. Hibbing and Cary Funk, **Perspectives on Politics**, (December, 2008). This is a solicited response to a critique of our 2005 APSR article “Are Political Orientations Genetically Transmitted?”

“Political Attitudes Vary with Physiological Traits” with Douglas R. Oxley, Kevin B. Smith, Matthew V. Hibbing, Jennifer L. Miller, Mario Scalora, Peter K. Hatemi, and John R. Hibbing, **Science**, (September 19, 2008).

“The New Empirical Biopolitics” with John R. Hibbing, **Annual Review of Political Science**, (June, 2008).

“Beyond Liberals and Conservatives to Political Genotypes and Phenotypes” with John R. Hibbing and Cary Funk, **Perspectives on Politics**, (June, 2008). This is a solicited response to a critique of our 2005 APSR article “Are Political Orientations Genetically Transmitted?”

"Personal, Interpersonal, and Political Temperaments" with John R. Hibbing, **Annals of the American Academy of Political and Social Science**, (November, 2007).

"Is Politics in our Genes?" with John R. Hibbing, **Tidsskriftet Politik**, (February, 2007).

"Biology and Rational Choice" with John R. Hibbing, **The Political Economist**, (Fall, 2005)

"Are Political Orientations Genetically Transmitted?" with John R. Hibbing and Carolyn Funk, **American Political Science Review**, (May, 2005). (The main findings table from this article has been reprinted in two college level text books - Psychology, 9th ed. and Invitation to Psychology 4th ed. both by Wade and Tavis, Prentice Hall, 2007).

"The Origin of Politics: An Evolutionary Theory of Political Behavior" with John R. Hibbing, **Perspectives on Politics**, (December, 2004).

"Accepting Authoritative Decisions: Humans as Wary Cooperators" with John R. Hibbing, **American Journal of Political Science**, (January, 2004).

"Electoral Convergence of the Two Houses of Congress" with John R. Hibbing, in **The Exceptional Senate**, ed. Bruce Oppenheimer, Columbus: Ohio State University Press, (2002).

"We're All in this Together: The Decline of Trust in Government, 1958-1996." in **What is it About Government that Americans Dislike?**, eds. John Hibbing and Beth Theiss-Morse, Cambridge: Cambridge University Press, (2001).

"The 2000 Census and the New Redistricting," **Texas State Bar Association School Law Section Newsletter**, (July, 2000).

"Overdraft: The Political Cost of Congressional Malfeasance" with Holly Teeters, Dan Ward, and Rick Wilson, **Journal of Politics** (August, 1994).

"Personal and Partisan Advantage in U.S. Congressional Elections, 1846-1990" with David W. Brady, in **Congress Reconsidered** 5th edition, eds. Larry Dodd and Bruce Oppenheimer, CQ Press, (1993).

"The 1990 Congressional Election Results and the Fallacy that They Embodied an Anti-Incumbent Mood" with John R. Hibbing, **PS** 25 (June, 1992).

"Constituency Population and Representation in the United States Senate" with John R. Hibbing. **Legislative Studies Quarterly**, (November, 1990).

"Editors' Introduction: Electing the U.S. Senate" with Bruce I. Oppenheimer. **Legislative Studies Quarterly**, (November, 1990).

"Personal and Partisan Advantage in U.S. Congressional Elections, 1846-1990" with David W. Brady, in **Congress Reconsidered** 4th edition, eds. Larry Dodd and Bruce Oppenheimer, CQ Press, (1988). Reprinted in *The Congress of the United States, 1789-1989*, ed. Joel Silby, Carlson Publishing Inc., (1991), and in *The Quest for Office*, eds. Wayne and Wilcox, St. Martins Press, (1991).

"Can Government Regulate Fertility? An Assessment of Pro-natalist Policy in Eastern Europe" with Jerome Legge. **The Western Political Quarterly** (December, 1986).

"Partisanship and Voting" with James Campbell, Mary Munro, and Bruce Campbell, in **Research in Micropolitics. Volume 1 - Voting Behavior**. Samuel Long, ed. JAI Press, (1986).

"Economic Conditions and Individual Vote in the Federal Republic of Germany" with Jerome S. Legge. **Journal of Politics** (November, 1984).

"Television Markets and Congressional Elections" with James Campbell and Keith Henry. **Legislative Studies Quarterly** (November, 1984).

"Economic Conditions and the Forgotten Side of Congress: A Foray into U.S. Senate Elections" with John R. Hibbing, **British Journal of Political Science** (October, 1982).

"Increased Incumbency Advantage in the House" with John R. Hibbing, **Journal of Politics** (November, 1981). Reprinted in *The Congress of the United States, 1789-1989*, Carlson Publishing Inc., (1991).

"The Electoral Impact of Economic Conditions: Who is Held Responsible?" with John R. Hibbing, **American Journal of Political Science** (August, 1981).

"Comment on Increased Incumbency Advantage" with John R. Hibbing, Refereed communication: **American Political Science Review** (March, 1981).

"Can Government Regulate Safety? The Coal Mine Example" with Michael Lewis-Beck, **American Political Science Review** (September, 1980).

Awards and Honors:

CQ Press Award - 1988, honoring the outstanding paper in legislative politics presented at the 1987 Annual Meeting of the American Political Science Association. Awarded for "The Demise of the Upper House and the Rise of the Senate: Electoral Responsiveness in the United States Senate" with John Hibbing.

Research Grants:

National Science Foundation, 2009-2011, "Identifying the Biological Influences on Political Temperaments", with John Hibbing, Kevin Smith, Kim Espy, Nicolas Martin and Read Montague. This is a collaborative project involving Rice, University of Nebraska, Baylor College of Medicine, and Queensland Institute for Medical Research.

National Science Foundation, 2007-2010, "Genes and Politics: Providing the Necessary Data", with John Hibbing, Kevin Smith, and Lindon Eaves. This is a collaborative project involving Rice, University of Nebraska, Virginia Commonwealth University, and the University of Minnesota.

National Science Foundation, 2007-2010, "Investigating the Genetic Basis of Economic Behavior", with John Hibbing and Kevin Smith. This is a collaborative project involving Rice, University of Nebraska, Virginia Commonwealth University, and the Queensland Institute of Medical Research.

Rice University Faculty Initiatives Fund, 2007-2009, "The Biological Substrates of Political Behavior". This is in assistance of a collaborative project involving Rice, Baylor College of Medicine, Queensland Institute of Medical Research, University of Nebraska, Virginia Commonwealth University, and the University of Minnesota.

National Science Foundation, 2004-2006, "Decision-Making on Behalf of Others", with John Hibbing. This is a collaborative project involving Rice and the University of Nebraska.

National Science Foundation, 2001-2002, dissertation grant for Kevin Arceneaux, "Doctoral Dissertation Research in Political Science: Voting Behavior in the Context of U.S. Federalism."

National Science Foundation, 2000-2001, dissertation grant for Stacy Ulbig, "Doctoral Dissertation Research in Political Science: Sub-national Contextual Influences on Political Trust."

National Science Foundation, 1999-2000, dissertation grant for Richard Engstrom, "Doctoral Dissertation Research in Political Science: Electoral District Structure and Political Behavior."

Rice University Research Grant, 1985, Recent Trends in British Parliamentary Elections.

Faculty Research Grants Program, University of Georgia, Summer, 1982. Impact of Media Structure on Congressional Elections, with James Campbell.

Papers Presented:

"The Physiological Basis of Political Temperaments" 6th European Consortium for Political Research General Conference, Reykjavik, Iceland (2011), with Kevin Smith, and John Hibbing.

"Identifying the Biological Influences on Political Temperaments" National Science Foundation Annual Human Social Dynamics Meeting (2010), with John Hibbing, Kimberly Espy, Nicholas Martin, Read Montague, and Kevin B. Smith.

"Political Orientations May Be Related to Detection of the Odor of Androstenone" Annual meeting of the Midwest Political Science Association, Chicago, IL (2010), with Kevin Smith, Amanda Balzer, Michael Gruszczynski, Carly M. Jacobs, and John Hibbing.

"Toward a Modern View of Political Man: Genetic and Environmental Transmission of Political Orientations from Attitude Intensity to Political Participation" Annual meeting of the American Political Science Association, Washington, DC (2010), with Carolyn Funk, Kevin Smith, and John Hibbing.

"Genetic and Environmental Transmission of Political Involvement from Attitude Intensity to Political Participation" Annual meeting of the International Society for Political Psychology, San Francisco, CA (2010), with Carolyn Funk, Kevin Smith, and John Hibbing.

"Are Violations of the EEA Relevant to Political Attitudes and Behaviors?" Annual meeting of the Midwest Political Science Association, Chicago, IL (2010), with Kevin Smith, and John Hibbing.

"The Neural Basis of Representation" Annual meeting of the American Political Science Association, Toronto, Canada (2009), with John Hibbing.

"Genetic and Environmental Transmission of Value Orientations" Annual meeting of the American Political Science Association, Toronto, Canada (2009), with Carolyn Funk, Kevin Smith, Matthew Hibbing, Pete Hatemi, Robert Krueger, Lindon Eaves, and John Hibbing.

"The Genetic Heritability of Political Orientations: A New Twin Study of Political Attitudes" Annual Meeting of the International Society for Political Psychology, Dublin, Ireland (2009), with John Hibbing, Cary Funk, Kevin Smith, and Peter K Hatemi.

"The Heritability of Value Orientations" Annual meeting of the Behavior Genetics Association, Minneapolis, MN (2009), with Kevin Smith, John Hibbing, Carolyn Funk, Robert Krueger, Peter Hatemi, and Lindon Eaves.

"The Ick Factor: Disgust Sensitivity as a Predictor of Political Attitudes" Annual meeting of the Midwest Political Science Association, Chicago, IL (2009), with Kevin Smith, Douglas Oxley Matthew Hibbing, and John Hibbing.

"The Ideological Animal: The Origins and Implications of Ideology" Annual meeting of the American Political Science Association, Boston, MA (2008), with Kevin Smith, Matthew Hibbing, Douglas Oxley, and John Hibbing.

"The Physiological Differences of Liberals and Conservatives" Annual meeting of the Midwest Political Science Association, Chicago, IL (2008), with Kevin Smith, Douglas Oxley, and John Hibbing.

"Looking for Political Genes: The Influence of Serotonin on Political and Social Values" Annual meeting of the Midwest Political Science Association, Chicago, IL (2008), with Peter Hatemi, Sarah Medland, John Hibbing, and Nicholas Martin.

"Not by Twins Alone: Using the Extended Twin Family Design to Investigate the Genetic Basis of Political Beliefs" Annual meeting of the American Political Science Association, Chicago, IL (2007), with Peter Hatemi, John Hibbing, Matthew Keller, Nicholas Martin, Sarah Medland, and Lindon Eaves.

"Factorial Association: A generalization of the Fulker between-within model to the multivariate case" Annual meeting of the Behavior Genetics Association, Amsterdam, The Netherlands (2007), with Sarah Medland, Peter Hatemi, John Hibbing, William Coventry, Nicholas Martin, and Michael Neale.

"Not by Twins Alone: Using the Extended Twin Family Design to Investigate the Genetic Basis of Political Beliefs" Annual meeting of the Midwest Political Science Association, Chicago, IL (2007), with Peter Hatemi, John Hibbing, Nicholas Martin, and Lindon Eaves.

"Getting from Genes to Politics: The Connecting Role of Emotion-Reading Capability" Annual Meeting of the International Society for Political Psychology, Portland, OR, (2007.), with John Hibbing.

"The Neurological Basis of Representative Democracy." Hendricks Conference on Political Behavior, Lincoln, NE (2006), with John Hibbing.

"The Neural Basis of Representative Democracy" Annual meeting of the American Political Science Association, Philadelphia, PA (2006), with John Hibbing.

"How are Political Orientations Genetically Transmitted? A Research Agenda" Annual meeting of the Midwest Political Science Association, Chicago Illinois (2006), with John Hibbing.

"The Politics of Mate Choice" Annual meeting of the Southern Political Science Association, Atlanta, GA (2006), with John Hibbing.

"The Challenge Evolutionary Biology Poses for Rational Choice" Annual meeting of the American Political Science Association, Washington, DC (2005), with John Hibbing and Kevin Smith.

"Decision Making on Behalf of Others" Annual meeting of the American Political Science Association, Washington, DC (2005), with John Hibbing.

"The Source of Political Attitudes and Behavior: Assessing Genetic and Environmental Contributions" Annual meeting of the Midwest Political Science Association, Chicago Illinois (2005), with John Hibbing and Carolyn Funk.

"The Source of Political Attitudes and Behavior: Assessing Genetic and Environmental Contributions" Annual meeting of the American Political Science Association, Chicago Illinois (2004), with John Hibbing and Carolyn Funk.

"Accepting Authoritative Decisions: Humans as Wary Cooperators" Annual Meeting of the Midwest Political Science Association, Chicago, Illinois (2002), with John Hibbing

"Can We Trust the NES Trust Measure?" Annual Meeting of the Midwest Political Science Association, Chicago, Illinois (2001), with Stacy Ulbig.

"The Impact of Organizational Structure on the Production of Social Capital Among Group Members" Annual Meeting of the Southern Political Science Association, Atlanta, Georgia (2000), with Allison Rinden.

"Isolating the Origins of Incumbency Advantage: An Analysis of House Primaries, 1956-1998" Annual Meeting of the Southern Political Science Association, Atlanta, Georgia (2000), with Kevin Arceneaux.

"The Electorally Indistinct Senate," Norman Thomas Conference on Senate Exceptionalism, Vanderbilt University; Nashville, Tennessee; October (1999), with John R. Hibbing.

"Interest Group Participation and Social Capital" Annual Meeting of the Midwest Political Science Association, Chicago, Illinois (1999), with Allison Rinden.

"We're All in this Together: The Decline of Trust in Government, 1958-1996." The Hendricks Symposium, University of Nebraska, Lincoln. (1998)

"Constituency Population and Representation in the United States Senate," Electing the Senate; Houston, Texas; December (1989), with John R. Hibbing.

"The Disparate Electoral Security of House and Senate Incumbents," American Political Science Association Annual Meetings; Atlanta, Georgia; September (1989), with John R. Hibbing.

"Partisan and Incumbent Advantage in House Elections," Annual Meeting of the Southern Political Science Association (1987), with David W. Brady.

"Personal and Party Advantage in U.S. House Elections, 1846-1986" with David W. Brady, 1987 Social Science History Association Meetings.

"The Demise of the Upper House and the Rise of the Senate: Electoral Responsiveness in the United States Senate" with John Hibbing, 1987 Annual Meeting of the American Political Science Association.

"A Comparative Analysis of Economic Voting" with Jerome Legge, 1985 Annual Meeting of the American Political Science Association.

"An Analysis of Economic Conditions and the Individual Vote in Great Britain, 1964-1979" with Jerome Legge, 1985 Annual Meeting of the Western Political Science Association.

"Can Government Regulate Fertility? An Assessment of Pro-natalist Policy in Eastern Europe" with Jerome Legge, 1985 Annual Meeting of the Southwestern Social Science Association.

"Economic Conditions and the Individual Vote in the Federal Republic of Germany" with Jerome S. Legge, 1984 Annual Meeting of the Southern Political Science Association.

"The Conditions Required for Economic Issue Voting" with John R. Hibbing, 1984 Annual Meeting of the Midwest Political Science Association.

"Incumbency Advantage in Senate Elections," 1983 Annual Meeting of the Midwest Political Science Association.

"Television Markets and Congressional Elections: The Impact of Market/District Congruence" with James Campbell and Keith Henry, 1982 Annual Meeting of the Southern Political Science Association.

"Economic Conditions and Senate Elections" with John R. Hibbing, 1982 Annual Meeting of the Midwest Political Science Association. "Pocketbook Voting: Economic Conditions and Individual Level Voting," 1982 Annual Meeting of the American Political Science Association.

"Increased Incumbency Advantage in the House," with John R. Hibbing, 1981 Annual Meeting of the Midwest Political Science Association.

Other Conference Participation:

Roundtable Participant – Closing Round-table on Biopolitics; 2016 UC Merced Conference on Bio-Politics and Political Psychology, Merced, CA.

Roundtable Participant "Genes, Brains, and Core Political Orientations" 2008 Annual Meeting of the Southwestern Political Science Association, Las Vegas.

Roundtable Participant "Politics in the Laboratory" 2007 Annual Meeting of the Southern Political Science Association, New Orleans.

Short Course Lecturer, "What Neuroscience has to Offer Political Science" 2006 Annual Meeting of the American Political Science Association.

Panel chair and discussant, "Neuro-scientific Advances in the Study of Political Science" 2006 Annual Meeting of the American Political Science Association.

Presentation, "The Twin Study Approach to Assessing Genetic Influences on Political Behavior" Rice Conference on New Methods for Understanding Political Behavior, 2005.

Panel discussant, "The Political Consequences of Redistricting," 2002 Annual Meeting of the American Political Science Association.

Panel discussant, "Race and Redistricting," 1999 Annual Meeting of the Midwest Political Science Association.

Invited participant, "Roundtable on Public Dissatisfaction with American Political Institutions", 1998 Annual Meeting of the Southwestern Social Science Association.

Presentation, "Redistricting in the '90s," Texas Economic and Demographic Association, 1997.

Panel chair, "Congressional Elections," 1992 Annual Meeting of the Southern Political Science Association.

Panel discussant, "Incumbency and Congressional Elections," 1992 Annual Meeting of the American Political Science Association.

Panel chair, "Issues in Legislative Elections," 1991 Annual Meeting of the Midwest Political Science Association.

Panel chair, "Economic Attitudes and Public Policy in Europe," 1990 Annual Meeting of the Southern Political Science Association

Panel discussant, "Retrospective Voting in U.S. Elections," 1990 Annual Meeting of the Midwest Political Science Association.

Co-convener, with Bruce Oppenheimer, of Electing the Senate, a national conference on the NES 1988 Senate Election Study. Funded by the Rice Institute for Policy Analysis, the University of Houston Center for Public Policy, and the National Science Foundation, Houston, Texas, December, 1989.

Invited participant, Understanding Congress: A Bicentennial Research Conference, Washington, D.C., February, 1989.

Invited participant--Hendricks Symposium on the United States Senate, University of Nebraska, Lincoln, Nebraska, October, 1988

Invited participant--Conference on the History of Congress, Stanford University, Stanford, California, June, 1988.

Invited participant, "Roundtable on Partisan Realignment in the 1980's", 1987 Annual Meeting of the Southern Political Science Association.

Professional Activities:

Other Universities:

Invited Speaker, Annual Lecture, Psi Kappa -the Psychology Club at Houston Community College, 2018.

Invited Speaker, Annual Allman Family Lecture, Dedman College Interdisciplinary Institute, Southern Methodist University, 2016.

Invited Speaker, Annual Lecture, Psi Sigma Alpha – Political Science Dept., Oklahoma State University, 2015.

Invited Lecturer, Department of Political Science, Vanderbilt University, 2014.

Invited Speaker, Annual Lecture, Psi Kappa -the Psychology Club at Houston Community College, 2014.

Invited Speaker, Graduate Student Colloquium, Department of Political Science, University of New Mexico, 2013.

Invited Keynote Speaker, Political Science Alumni Evening, University of Houston, 2013.

Invited Lecturer, Biology and Politics Masters Seminar (John Geer and David Bader), Department of Political Science and Biology Department, Vanderbilt University, 2010.

Invited Lecturer, Biology and Politics Senior Seminar (John Geer and David Bader), Department of Political Science and Biology Department, Vanderbilt University, 2008.

Visiting Fellow, the Hoover Institution, Stanford University, 2007.

Invited Speaker, Joint Political Psychology Graduate Seminar, University of Minnesota, 2007.

Invited Speaker, Department of Political Science, Vanderbilt University, 2006.

Member:

Editorial Board, Journal of Politics, 2007-2008.

Planning Committee for the National Election Studies' Senate Election Study, 1990-92.

Nominations Committee, Social Science History Association, 1988

Reviewer for:

American Journal of Political Science

American Political Science Review

American Politics Research

American Politics Quarterly

American Psychologist

American Sociological Review

Canadian Journal of Political Science

Comparative Politics

Electoral Studies

Evolution and Human Behavior

International Studies Quarterly

Journal of Politics
 Journal of Urban Affairs
 Legislative Studies Quarterly
 National Science Foundation
 PLoS ONE
 Policy Studies Review
 Political Behavior
 Political Communication
 Political Psychology
 Political Research Quarterly
 Public Opinion Quarterly
 Science
 Security Studies
 Social Forces
 Social Science Quarterly
 Western Political Quarterly

University Service:

Member, University Senate, 2021-2023.

Member, University Parking Committee, 2016-2022.

Member, University Benefits Committee, 2013-2016.

Internship Director for the Department of Political Science, 2004-2018.

Member, University Council, 2012-2013.

Invited Speaker, Rice Classroom Connect, 2016.

Invited Speaker, Glasscock School, 2016.

Invited Speaker, Rice Alumni Association, Austin, 2016.

Invited Speaker, Rice Alumni Association, New York City, 2016.

Invited Speaker, Rice TEDxRiceU , 2013.

Invited Speaker, Rice Alumni Association, Atlanta, 2011.

Lecturer, Advanced Topics in AP Psychology, Rice University AP Summer Institute, 2009.

Scientia Lecture Series: “Politics in Our Genes: The Biology of Ideology” 2008

Invited Speaker, Rice Alumni Association, Seattle, San Francisco and Los Angeles, 2008.

Invited Speaker, Rice Alumni Association, Austin, Chicago and Washington, DC, 2006.

Invited Speaker, Rice Alumni Association, Dallas and New York, 2005.

Director: Rice University Behavioral Research Lab and Social Science Computing Lab, 2005-2006.

University Official Representative to the Inter-university Consortium for Political and Social Research, 1989-2012.

Director: Rice University Social Science Computing Lab, 1989-2004.

Member, Rice University Information Technology Access and Security Committee, 2001-2002

Rice University Committee on Computers, Member, 1988-1992, 1995-1996; Chair, 1996-1998, Co-chair, 1999.

Acting Chairman, Rice Institute for Policy Analysis, 1991-1992.

Divisional Member of the John W. Gardner Dissertation Award Selection Committee, 1998

Social Science Representative to the Educational Sub-committee of the Computer Planning Committee, 1989-1990.

Director of Graduate Admissions, Department of Political Science, Rice University, 1986-1988.

Co-director, Mellon Workshop: Southern Politics, May, 1988.

Guest Lecturer, Mellon Workshop: The U.S. Congress in Historical Perspective, May, 1987 and 1988.

Faculty Associate, Hanszen College, Rice University, 1987-1990.

Director, Political Data Analysis Center, University of Georgia, 1982-1985.

External Consulting:

Expert Witness, Dixon v. Lewisville ISD, racially polarized voting analysis, 2022.

Expert Witness, Soto Palmer v. Hobbs, (Washington State), racially polarized voting analysis, 2022.

Expert Witness, Pendergrass v. Raffensperger, (Georgia State House and Senate), racially polarized voting analysis, 2022.

Expert Witness, LULAC, et al. v. Abbott, et al., Voto Latino, et al. v. Scott, et al., Mexican American Legislative Caucus, et al. v. Texas, et al., Texas NAACP v. Abbott, et al., Fair Maps Texas, et al. v. Abbott, et al., US v. Texas, et al. (consolidated cases) challenges to Texas Congressional, State Senate, State House, and State Board of Education districting, 2022.

Expert Witness, Robinson/Galmon v. Ardoyn, (Louisiana), racially polarized voting analysis, 2022.

Expert Witness, Christian Ministerial Alliance et al v. Arkansas, racially polarized voting analysis, 2022.

Expert Witness, Johnson v. Wisconsin Elections Commission, 2022.

Expert Witness, Rivera, et al. v. Schwab, Alonzo, et al. v. Schwab, Frick, et al. v. Schwab, (consolidated cases) challenge to Kansas congressional map, 2022.

Expert Witness, Grant v. Raffensperger, challenge to Georgia congressional map, 2022

Expert Witness, Brooks et al. v. Abbot, challenge to State Senate District 10, 2022.

Expert Witness, Elizondo v. Spring Branch ISD, 2022.

Expert Witness, Portugal v. Franklin County, et al., challenge to Franklin County, Washington at large County Commissioner's election system, 2022.

Consulting Expert, Gressman Math/Science Petitioners, Pennsylvania Congressional redistricting, 2022.

Consultant, Houston Community College – evaluation of election impact for redrawing of college board election districts, 2022.

Consultant, Lone Star College – evaluation of election impact for redrawing of college board election districts, 2022.

Consultant, Killeen ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Houston ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Brazosport ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Dallas ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Lancaster ISD – redrawing of all school board member election districts including demographic analysis and redrawing of election districts, 2021.

Consultant, City of Baytown – redrawing of all city council member election districts including demographic analysis and redrawing of election districts, 2021.

Consultant, Goose Creek ISD – redrawing of all board member election districts including demographic analysis and redrawing of election districts, 2021.

Expert Witness, Bruni et al. v. State of Texas, straight ticket voting analysis, 2020.

Consulting Expert, Sarasota County, VRA challenge to district map, 2020.

Expert Witness, Kumar v. Frisco ISD, TX, racially polarized voting analysis, 2019.

Expert Witness, Vaughan v. Lewisville ISD, TX, racially polarized voting analysis, 2019.

Expert Witness, Johnson v. Ardoin, (Louisiana), racially polarized voting analysis, 2019.

Expert Witness, Flores et al. v. Town of Islip, NY, racially polarized voting analysis, 2018.

Expert Witness, Tyson v. Richardson ISD, racially polarized voting analysis, 2018.

Expert Witness, Dwight v. State of Georgia, racially polarized voting analysis, 2018.

Expert Witness, NAACP v. East Ramapo Central School District, racially polarized voting analysis, 2018.

Expert Witness, Georgia NAACP v. State of Georgia, racially polarized voting analysis, 2018.